

Remarks

Claims 57 and 59-65 remain in the present application for the Examiner's review and consideration. Claims 1-56 were previously canceled. No new matter has been added by these amendments.

Claim 57 has been amended to state that that step (ii) the attaching the valve to the inner liner is by pressing-fitting. Support for this amendment can be found in original claim 2 of the parent international application PCT/US2004/039241 and on page 10, lines 8-14 and page 8, lines 21-24. No new matter has been added. Claim 58 is canceled.

Claims 57-59 stand rejected as being obvious under 35 U.S.C. § 103 (a), in light of U.S. Publication No. 2002/0197522 to Lawrence *et al.* (hereinafter Lawrence) and U.S. Patent 3,795,558 to Dabney *et al.* (hereinafter Dabney). Claims 60-61 are rejected as being obviousness in light of Lawrence and Dabney in view of U.S. Patent 6,021,930 to de Pous (hereinafter de Pous). Claims 62-65 are rejected for obviousness in light of Lawrence and Dabney in view of U.S. Patent 5,244,615 to Hobbs (hereinafter Hobbs).

Claims 57-59 stand rejected as being obvious under 35 U.S.C. § 103 (a), in light of U.S. Publication No. 2005/0079128 to DeVos *et al.* (hereinafter Devos) and Dabney. Claims 60-61 are rejected as being obvious in light of DeVos and Dabney in view of de Pous. Claims 62-65 are rejected as being obvious in light of DeVos and Dabney in view of Hobbs.

Claim 57 is the only independent claim and is rejected as being obvious over Lawrence and Dabney, and as obvious over DeVos and Dabney.

The seminal decision on the law of obviousness is *KSR International Co. v. Teleflex Inc. et al.*, 550 U.S. 398, 127 S.Ct 1727, 82 USPQ2d 1385 (2007). The *KSR* decision overruled the rigid application of the "teaching, suggestion, or motivation" test under Federal Circuit case law, *Id.* at 1741-42, and changed the way patent applicants and patent examiners have conducted obviousness analysis. The *KSR* decision also reaffirms the holdings of *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), which requires the determination of the scope and content of the prior art and the differences between the prior art and the relevant claims. *Id.* at 1734. Then, a determination of whether this difference is obvious to one of ordinary skill in the art. *Id.* In evaluating the scope and content of the prior art, a prior art reference must be considered in

its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)¹; *see also* MPEP 2141.02 VI.

Claim 57, as amended, requires that the valve is attached by press-fitting to the inner liner, and is not obvious in view of Lawrence and Dabney.

As shown in Figures 10, 11, and 12a-b of Lawrence, it isn't known exactly how "sealable exit port" 88a is attached to bladder or inner liner 86a. Paragraph 0096 and Figures 12a and 12b suggest that exit port 88a is connected to the fuel cell by "device port 127." An unnumbered C-shaped clamp in Figure 12a appears to provide a clamping force between exit port 88a and possibly (although by no means certain) the bladder or the device port 127. No press-fitting is disclosed, contrary to step (ii) of claim 57. Moreover, there is no attachment between the valve 88a and outer casing 92a. Referring to Figure 10 and 11 of Lawrence, although shown in an exploded view, when assembled the outer casing 92a of fuel supply 39a would fit around the opening on liner 86a. There isn't any contact between exit port 88a and outer casing 92a, contrary to step (iv) of claim 57. The examiner admits that "the liner and valve are somewhat retained loosely simply by passing through the opening in the outer casing," but discusses an indirect contact between the liner/valve and the outer casing through compressed foam or spring members 87a. Applicants have amended step (iv) to recite that the valve is directly attached to the outer casing to distinguish this feature, which is shown and discussed throughout the of the present specification, from Lawrence.

Dabney cannot remedy the deficiencies of Lawrence. Dabney dose not disclose a press-fitting connecting between flexible drip barrel 6 and rigid spike 2. Dabney uses a sonic welding tool to melt and bend geometrically and specially designed projection 16 of spike 2 to wrap around geometrically and specially designed flange (or foot) 24 of drip barrel 6 to retain foot 24 and drip barrel 6 within a pocket formed by projection 16, end surface 22 and projection 18, as best shown in Figure 3 of Dabney. Dabney does not teach press-fitting.

¹ Emphasis is supplied, unless indicated otherwise.

Assuming *arguendo*, if a person of ordinary skill in the art does combine the teaching of ultrasonic welding to join two rigid parts from Dabney to Lawrence, as suggested by the examiner, this person of ordinary skill would ultrasonically weld outer casing 92a to expandable pressure member 87a or 87b, and not to exit port 88a. Hence, claim 57 is patentable over the combination of Lawrence and Dabney.

Applicants also would like to point out that contrary to the examiner's belief that member 32 is a rigid outer casing (see Office Action at top of page 5), member 32 is the inside chamber of ultrasonic horn 30, *i.e.*, member 32 is part of the sonic welding tool and not a part of the workpiece. (See Dabney col. 4, lines 16-18).

The combination of DeVos and Dabney also does not have all the elements of amended claim 57. DeVos does not disclose step (ii) "attaching the valve to the inner liner by press-fitting." Figures 2 and 3 of DeVos do not show how connector 108 or 110 is attached to liner 118 and 120, respectively. However, paragraph 0023 of DeVos teaches that connector 108 simply "extends into the flexible fuel container 118," and connector 110 is assembled the same way. This is not press-fitting, and Figures 2 and 3 shows that inner liners 118 and 120 merely touch connector 108 and 110 at their thin edges. No attachment method is disclosed.

Furthermore, DeVos teaches away from any attachment between the liners and connectors. In paragraph 0042, DeVos teaches using a "super-absorbent material" in the flexible inner liner 120 or other absorbent material in outer casing 102 to absorb leaks of byproduct and/or fuel. In paragraph 0040, DeVos states that "it may still be desirable to use chemically resistant materials [for housing 102] to contain a leak more effectively." A person of ordinary skill in the art reading DeVos as a "whole" (see MPEP 2141.02 VI) can reasonably conclude that the strategy offered by DeVos is not to be concerned about the attachment between the valve and the inner liner, but to handle the leak within the cartridge. This teaches away from step (ii) of claim 57. As stated above, Dabney cannot remedy this deficiency of DeVos. For this reason alone, claim 57 is patentable over the DeVos and Dabney combination.

Furthermore, there is no expectation of success for attaching the valve by heat to the outer casing as stated in step (iv) of claim 57. In accordance with MPEP § 2143.02, there must be a reasonable expectation of success that the suggested modification or combination of the

prior art will lead to the claimed invention to establish a *prima facie* obvious rejection. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Dabney in column 2, lines 14-20 warns that the materials of the rigid parts to be joined should be the same, or their chemical compositions should be the same or similar and their melt temperatures should be close together. DeVos does disclose the materials of the housing or outer casing 102 in paragraph 0040; however, is silent on the materials for valve 108 or 110. As best shown in Figure 5 and discussed in paragraphs 0037-0039, valve 108 comprises “compliant septum 158” which provides a seal until needle 170 penetrates septum 158. The most common material for a compliant septum is a rubber or an elastomer, similar to a test tube rubber plug or a rubber septum on medicinal vials to seal around a penetrating syringe needle. Rubbers and elastomers are thermoset materials, which do not melt but burn when heated. One of ordinary skill in the art would not use heat to attach the valve to the outer casing as stated in step (iv) of claim 57 because the heat may burn compliant septum 158. Hence, there is no reasonable expectation of success in combining the ultrasonic welding taught in Dabney to attach valve 108 (with compliant septum 158) to outer casing 102 of DeVos. For this additional reason, claim 57 is patentable over the combination of DeVos and Dabney.

Because claim 59 depends on allowable independent claim 57 and adds further limitations thereto, it is patentable over Lawrence and Dabney and DeVos and Dabney. The Applicants reserve the right to further support the patentability of these dependent claims should that become necessary.

Claims 60-65 all depend upon allowable independent claim 57 and add further limitations thereto, and therefore are patentable at least for that reason alone. Moreover, the tertiary references of de Pous and Hobbs do not overcome the deficiencies of Lawrence or DeVos, as stated above. Applicants reserve the right to further support the patentability of these dependent claims, should that become necessary.

Prompt and favorable consideration of this Amendment is respectfully requested. All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been

made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

A petition for a one month extension of time, as well as, payment of the required fee is submitted herewith. If any further fees are required, the Commissioner may charge appropriate fees to The H.T. Than Law Group, Deposit Account No. 50-1980, and if any extension of time is required, it is hereby petitioned for under 37 C.F.R. § 1.136.

Respectfully submitted,

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